IMPHY UGINE PRECISION

MASKING DEVICE FOR A FLAT-SCREEN COLOUR-DISPLAY CATHODE-RAY TUBE WITH A TENSIONED SHADOW MASK MADE OF Fe-Ni ALLOYS

Abstract

Masking device for a flat-screen colour-display cathode-ray tube, comprising a support frame for a tensioned shadow mask and a tensioned shadow mask. The support frame is made of a hardened Fe-Ni alloy having a thermal expansion coefficient between 20°C and 150°C of less than 5×10^{-6} K^{-1} and a yield stress $R_{p0.2}$ at 20°C of greater than 700 MPa; the tensioned shadow mask is made of an Fe-Ni alloy having a thermal expansion coefficient between 20°C and 150°C of less than 3×10^{-6} K^{-1}; the Fe-Ni alloys are chosen so that: below a temperature T_1, the mean expansion coefficient α_{20-T}, between 20°C and T, of the alloy of the support frame is greater than the mean expansion coefficient α_{20-T} of the alloy of the shadow mask, and above T_1 the coefficient α_{20-T} of the alloy of the frame is less than the coefficient α_{20-T} of the alloy of the shadow mask, where $T_1 < 350$°C and preferably < 300°C.

Figure for the abstract: none